

Notice of Allowability

Application No.

09/191,577

Applicant(s)

FREES ET AL.

Examiner

Art Unit

Angel A. Castro

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed 1/5/07.
2. ☒ The allowed claim(s) is/are 52-72, renumbered consecutively as allowed claims 1-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


ANGEL CASTRO
PRIMARY EXAMINER

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 1/5/07 has been entered.

Allowable Subject Matter

2. Claims 52-72 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The prior art of record neither suggest nor renders obvious the instant combination in a mounting interface for providing a steadfast relationship between a motor operated at a drive frequency and a baseplate, the mounting interface comprising three surface points having an angular distribution therebetween and providing a minimum planar surface acting as a common boundary between the motor and the baseplate, wherein the angular distribution, size, shape and material of the three surface points affect a vibration mode at a resonant frequency, and wherein at least one of the angular distribution, size, shape and material of the three surface points is

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configured to shift the resonant frequency away from the drive frequency to minimize vibration as set forth in independent claim 52.

The prior art of record neither suggest nor renders obvious the instant combination in a data storage system, comprising: a storage medium; an actuator including a transducer disposed at a distal end of an actuator arm; an actuator motor, coupled to the actuator, for moving the transducer relative to the storage medium; a baseplate; a spindle motor for rotating the storage medium; a mount flange, coupled to the spindle motor, for coupling the spindle motor to the baseplate; and a mounting interface disposed between the mount flange and the baseplate, the mounting interface providing a steadfast relationship between the spindle motor operated at a drive frequency and the baseplate, the mounting interface comprising three surface points having an angular distribution therebetween and providing a minimum planar surface acting as a common boundary between the motor and the baseplate, wherein the angular distribution, size, shape and material of the three surface points affect a vibration mode at a resonant frequency, and wherein at least one of the angular distribution, size, shape and material of the three surface points is configured to shift the resonant frequency away from the drive frequency to minimize vibration as set forth in independent claim 59.

The prior art of record neither suggest nor renders obvious the instant combination in a method for reducing acoustic dynamics of a spindle motor, comprising: providing a motor operated at a drive frequency; providing a baseplate; forming a mounting interface for providing a minimum planar surface acting as a common boundary between the motor and the baseplate and having three surface points having an angular distribution therebetween, wherein the angular distribution, size, shape and material of the three surface points affect a vibration mode at a

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resonant frequency; and configuring at least one of the angular distribution, size, shape and material of the three surface points to shift the resonant frequency away from the drive frequency to minimize vibration as set forth in independent claim 66.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel A. Castro whose telephone number is 571-272-7584. The examiner can normally be reached on Monday through Thursday, 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Angel Castro C". The signature is written in a cursive, flowing style.

Angel Castro, Ph.D.